

Deployment guide for vuApp360 Free Trial

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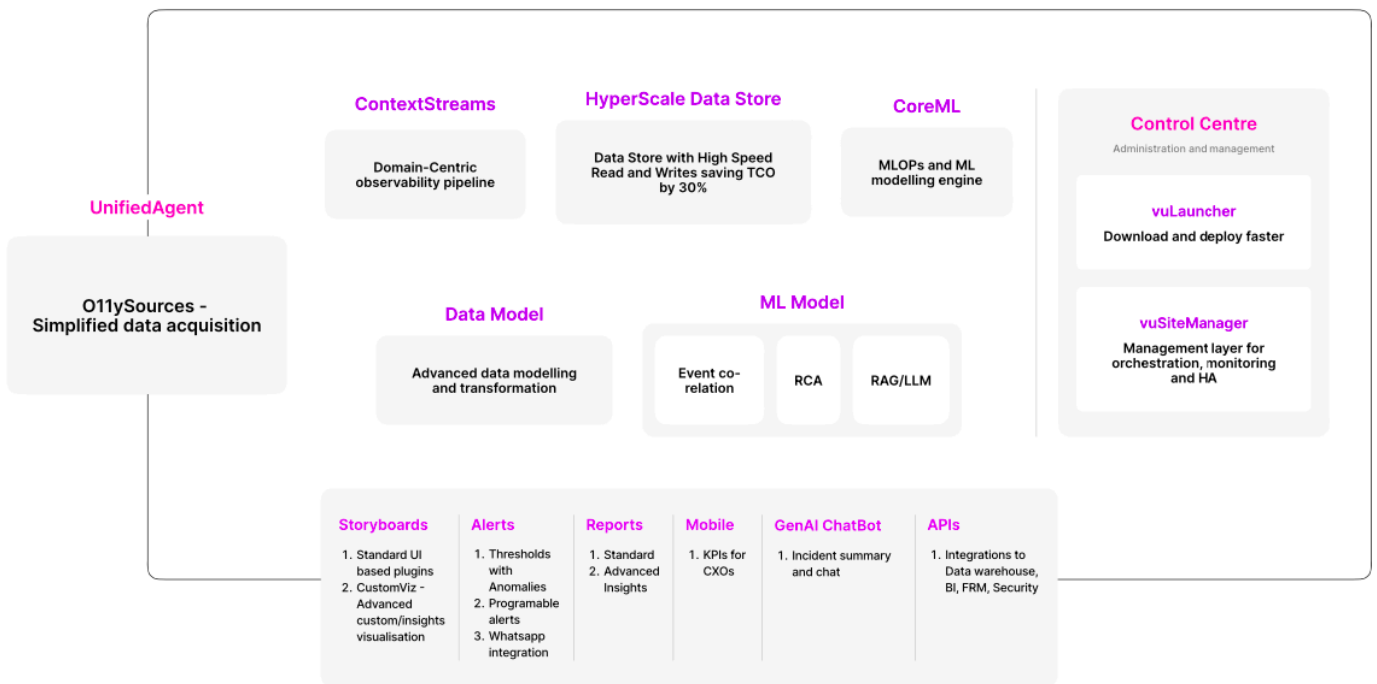
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Architecture Overview

vuSmartMaps™, is a business journey observability platform, uses advanced AI/ML models to deliver actionable contextualized intelligent insights for end-to-end business operations, providing unified observability across network, infrastructure, and application layers. Real-time business observability and analytics enable businesses to achieve 99.99% application availability and enhance customer satisfaction. vuSmartMaps provides a flexible solution for businesses of all sizes, utilizing scalable system architecture with the latest technologies, languages, and Gen AI features to enhance your organization’s growth and boost brand value.

vuSiteManager helps functions to install or upgrade service, or vuSmartmaps.

vuLauncher helps in the actual installation of vuSmartmaps.



Introduction

Welcome to the vuSmartMaps Installation Guide. This documentation provides step-by-step instructions to download and set up the vuSmartMaps base platform within 30 minutes. By following this guide, you will be able to access our advanced Application Observability Dashboards, which leverage Traces as an observability source and include comprehensive OpenTelemetry (OTEL) support.

Prerequisites

1. A Virtual Machine with at least 6 cores, 64GB memory.
2. A volume disk should be created along with the VM with min 200GB disk space.
3. Create a single mount point to store the Hyperscale data (The main database to store all the data and object files), with a minimum of 200GB disk space.
4. We should have a **/var** partition in all VMs with minimum 80GB to load the docker images.
5. Supported OS
 - a. Ubuntu - 20.04, 22.04
 - b. RHEL - 7.x, 8.x, 9.x
 - c. CentOS - 7.x,8.x
 - d. Rocky - 9.x
 - e. Oracle Linux - 7.x,8.x

Ports Description

Before proceeding, ensure that the following ports are properly configured on your system:

SNo	Port	Protocol	Description
1	443	TCP	UI port. Ports should be open between all vuSmartMaps server and site-manager servers. Also it should be accessible from desktop
2	8080	TCP	Installer service port. Ports should be open between all vuSmartMaps server and site-manager servers. Also it should be accessible from desktop
3	30910, 30901	TCP	Object storage service port. Ports should be open between all vuSmartMaps server and site-manager servers. Also it should be accessible from desktop
4	4317	OTLP	This port is used to send telemetry data to otel collector from instrumented applications.
5	4318	OTLP	This is used to receive the data related to OTEL traces

Deployment Steps

You must have access to a VM with the minimal configuration mentioned in the prerequisite below. You should have the 'ssh' credentials/key to be able to ssh to the virtual machine. Please execute below steps to deploy vuSmartMaps in the virtual machine.

Creating Directory for Archival

Data partitions needs to be created for storing the backup data

1. Run the below commands in the VM to create a directory for Data Archival
 - `sudo mkdir /data1`

- sudo chown -R vunet:vunet /data1

Note:

- User can provide any directory name instead of /data1

Downloading the binary

1. Create a folder and download the NG installation binary on your VM using the below command
 - wget https://download.vunetsystems.com/_Downloads/_vuDocker_/Traces/vuSmartMaps_NG_2_8_traces.tar.gz --user=customer --password=customer#7814 --no-check-certificate
2. Confirm the downloaded binary using
 - **md5sum vuSmartMaps_NG_2_8_traces.tar.gz**
 - The output of the md5sum should be - <4d12732906ae6deda2ee0b95c56df6df>
3. Once the build is downloaded successfully, extract the build file using
 - tar -xvzf vuSmartMaps_NG_2_8_traces.tar.gz
4. Once extracted, start the launcher, using
 - ./build/launcher_linux_x86_64
5. Access the launcher UI from a web browser using the link provided, once the launcher has started

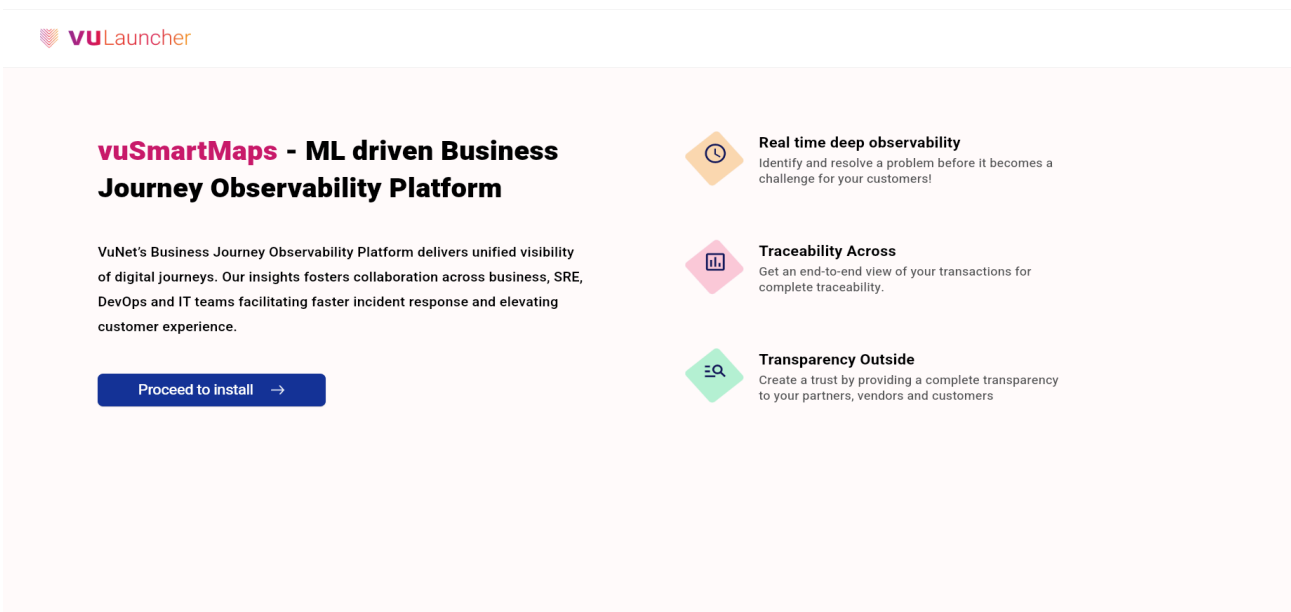
```
vunet@e2e-87-24:~$ ./build/launcher_linux_x86_64
2024-05-15 20:46:44 INFO util/read_config.go:79 Reading the config files : Config.yaml
2024-05-15 20:46:44 INFO web/main.go:73 starting vulauncher. URL: http://164.52.218.24:8080/
```

Note:

- Since port-8080 is occupied, please use any other ports for instrumentation the java application

Welcome Page

- This will be the starting page for Installation.
- Click the **Proceed to install** button, to move to the next stages.

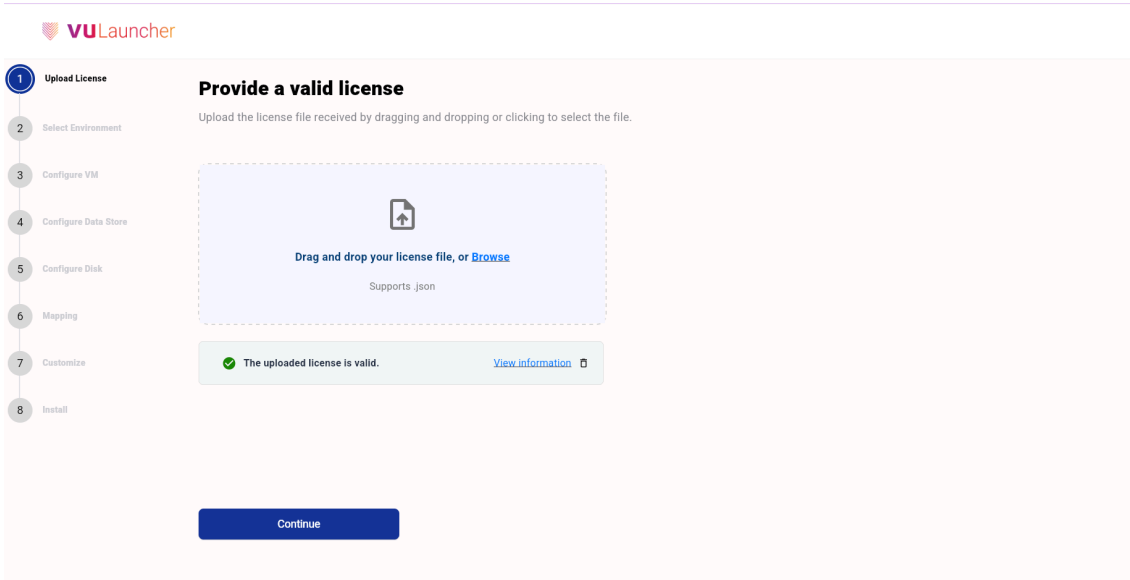


The screenshot shows the VU Launcher welcome page. At the top left is the VUNet logo. The main heading is "vuSmartMaps - ML driven Business Journey Observability Platform". Below this is a paragraph: "VuNet's Business Journey Observability Platform delivers unified visibility of digital journeys. Our insights fosters collaboration across business, SRE, DevOps and IT teams facilitating faster incident response and elevating customer experience." A blue button labeled "Proceed to install" with a right arrow is positioned below the text. To the right of the main heading are three feature cards, each with an icon and a title:

- Real time deep observability**: Identify and resolve a problem before it becomes a challenge for your customers! (Icon: clock)
- Traceability Across**: Get an end-to-end view of your transactions for complete traceability. (Icon: document with lines)
- Transparency Outside**: Create a trust by providing a complete transparency to your partners, vendors and customers (Icon: magnifying glass over a document)

1.Upload License

1. Here you need to provide a valid license. This license file will contain the services that are going to be installed and its required resources.
2. Upload the valid license and click on **Continue**.



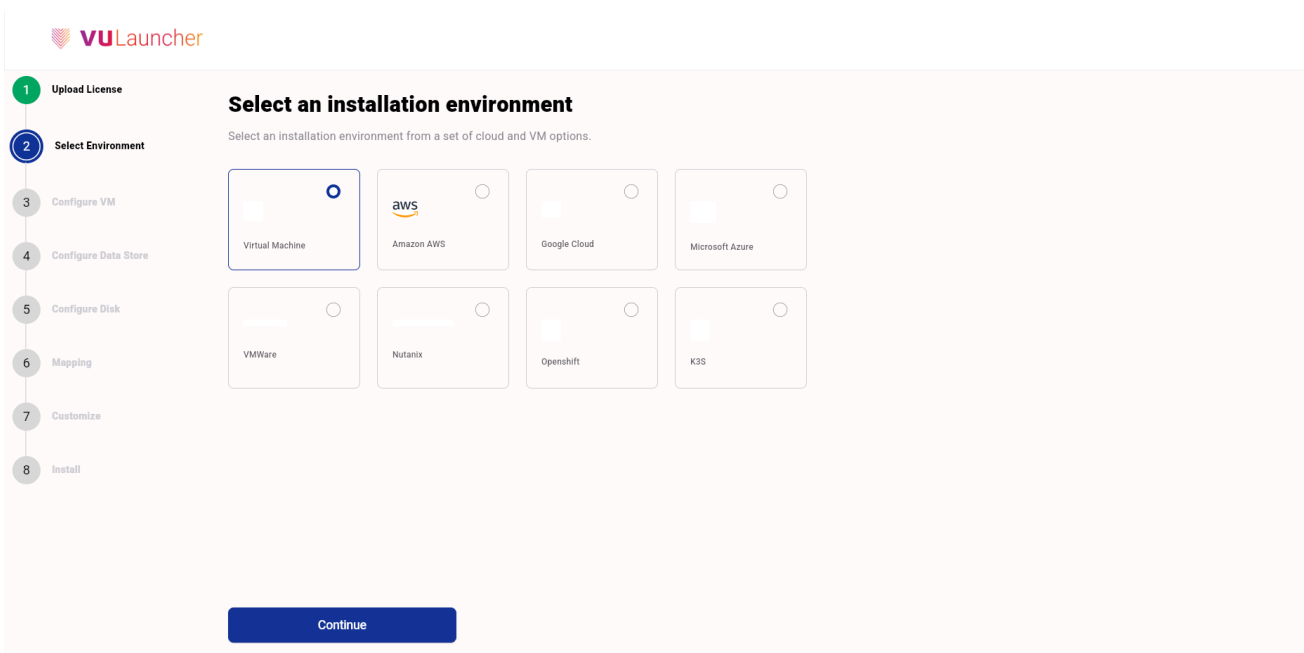
The screenshot shows the 'Provide a valid license' step in the VU Launcher interface. On the left is a vertical progress bar with steps 1 through 8. Step 1, 'Upload License', is highlighted. The main area has the heading 'Provide a valid license' and a sub-heading 'Upload the license file received by dragging and dropping or clicking to select the file.' Below this is a dashed box containing a file icon and the text 'Drag and drop your license file, or [Browse](#)'. Underneath the dashed box, it says 'Supports .json'. A green checkmark message states 'The uploaded license is valid.' with a 'View information' link. At the bottom is a blue 'Continue' button.

Note:

- License file will be shared along with the Traces deployment mail.

2. Installation Environment

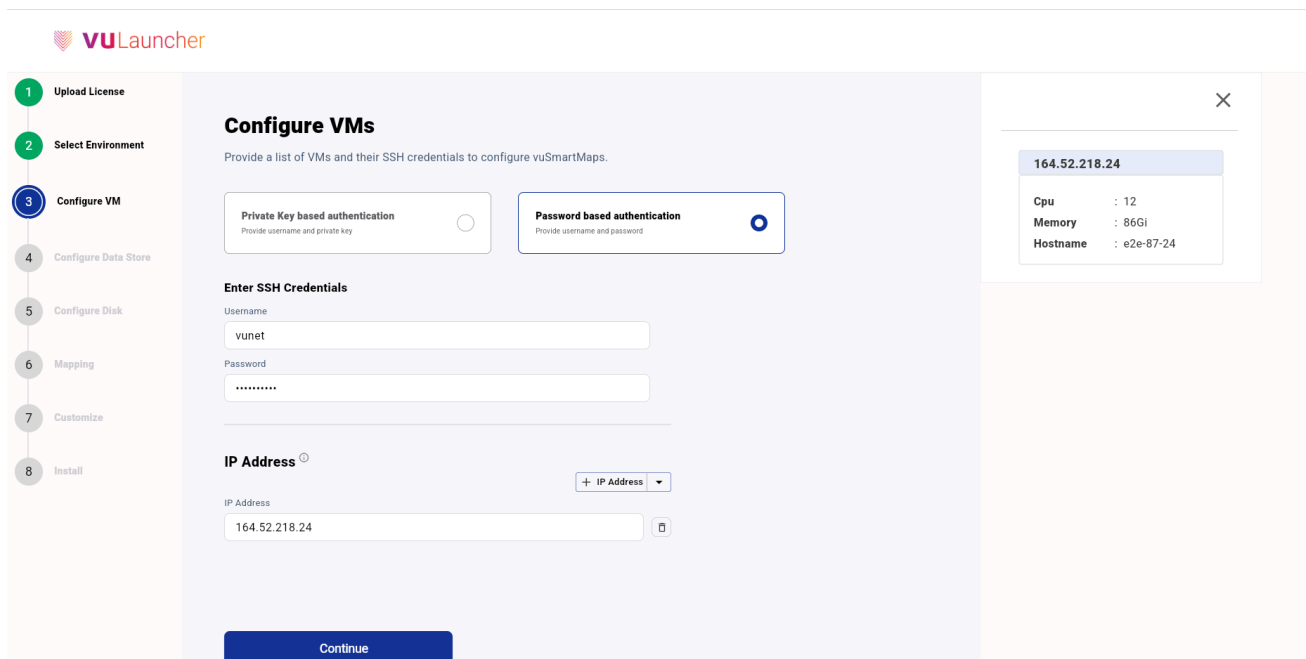
1. Here, you will be prompted to select your installation environment choice
2. Currently, we only support the **Virtual Machine Environment** Type. Support for other environments are coming in the next phases.
3. Click **Virtual Machine** and **Continue** Button.



The screenshot shows the 'Select an installation environment' step in the VU Launcher interface. The progress bar on the left highlights step 2, 'Select Environment'. The main area has the heading 'Select an installation environment' and a sub-heading 'Select an installation environment from a set of cloud and VM options.' Below this are eight selectable options in a grid: 'Virtual Machine' (selected with a blue circle), 'Amazon AWS', 'Google Cloud', 'Microsoft Azure', 'VMWare', 'Nutanix', 'Openshift', and 'K3S'. At the bottom is a blue 'Continue' button.

3. Configure VM

1. Here you need to provide the VM Credentials under **Password-based authentication**
2. In the IP Address section. Add the Public IP address of the VM where you want to install the vuSmartMaps.
3. After providing all the fields click on **Continue**. The backend services will verify if the credentials are valid, and try to allocate the services to the available VM.
4. If everything is successful, the metrics for the VM will be displayed on the right-hand side.



Configure VMs

Provide a list of VMs and their SSH credentials to configure vuSmartMaps.

Private Key based authentication
Provide username and private key

Password based authentication
Provide username and password

Enter SSH Credentials

Username:

Password:

IP Address ⊕ IP Address ▾

IP Address:

Continue

164.52.218.24	
Cpu	: 12
Memory	: 86Gi
Hostname	: e2e-87-24

4. Configure Data Store

For Hyperscale data tier configuration, we have below options:

- Hot: Most frequently used data will be stored here, so preferably choose a storage class which has high Disk IOPS. This disk should always be selected.
- Warm: We store data here which is accessed not so frequently. So a default storage class would suffice.
- Cold: This is where we will store data for Archival purposes. We store this data in S3 bucket (Minio).
- In this step, we need to select the nodes where we have the Hot, Warm, and Cold mounts available. And based on this section, the storage classes will be configured and used for storing data in the Hyperscale database.
- Based on the requirements, choose the disk(s) required for the installation.

VU Launcher

1 Upload License
2 Select Environment
3 Configure VM
4 **Configure Data Store**
5 Configure Disk
6 Mapping
7 Customize
8 Install

Data store configuration

Enter disk paths

HOT tier disk path: WARM tier disk path (Optional*) COLD tier disk path (Optional*)

IP Address	HOT Disk	WARM Disk	COLD Disk
164.52.218.24	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

[Continue](#)

5. Configure Disk

Based on the previous step, 3 storage classes will be configured for each type of storage. Accordingly we need to assign the storage class and encryption setting for each disk.

Note: As of now we're not supporting encryption. So, select the Not Encrypted option here.

VU Launcher

1 Upload License
2 Select Environment
3 Configure VM
4 Configure Data Store
5 **Configure Disk**
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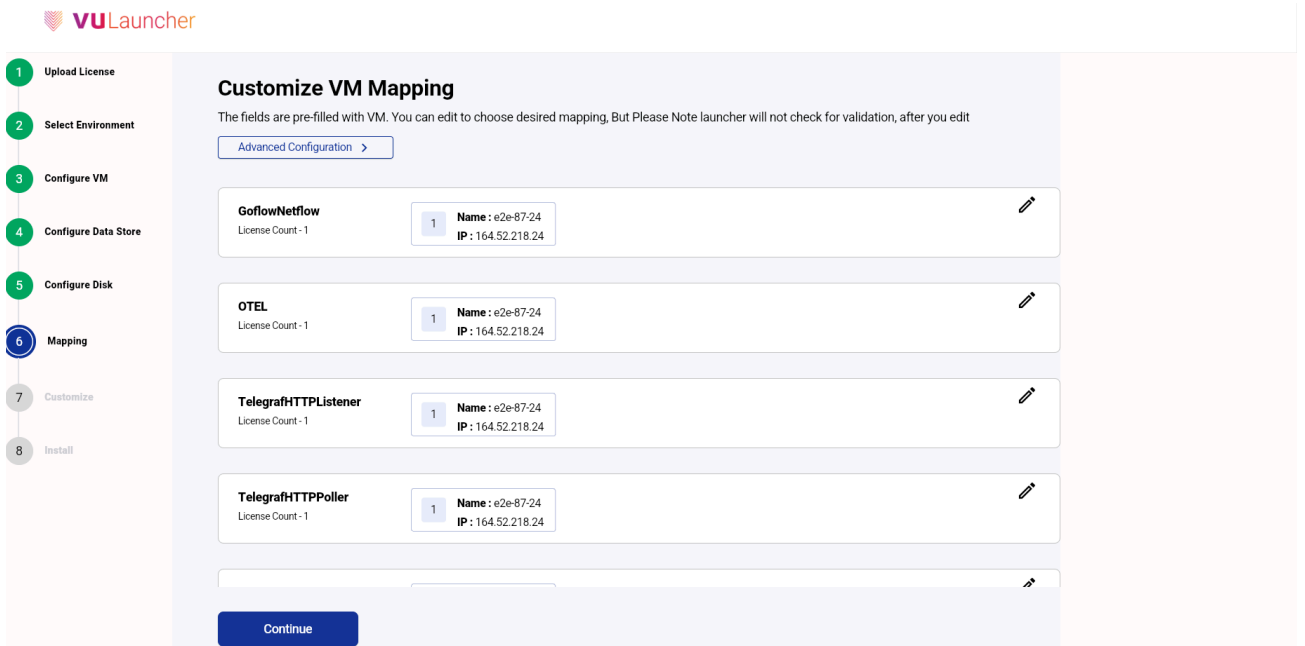
HyperScale disk configuration

Data Tier: <input type="text" value="HOT"/>	Select data storage: <input type="text" value="longhorn"/>	Select Encryption for HOT tier: <input type="text" value="Not Encrypted"/>
Data Tier: <input type="text" value="WARM"/>	Select data storage: <input type="text" value="ignore"/>	Select Encryption for WARM tier: <input type="text" value="Not Encrypted"/>
Data Tier: <input type="text" value="COLD"/>	Select data storage: <input type="text" value="ignore"/>	

[Continue](#)

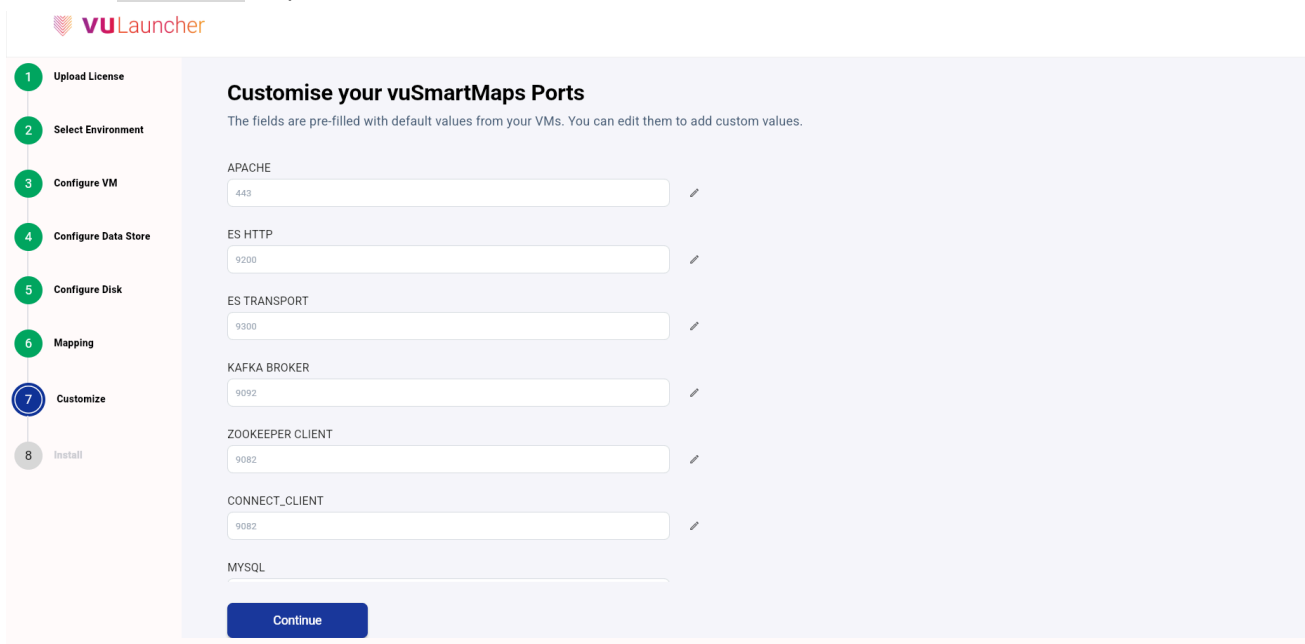
6. Mapping

1. By default, the backend will allocate resources to the available VM in the best possible way. No changes are needed here, click on **Continue** to proceed



7. Customize


1. Here users can override the port that the service uses.
2. There may be cases where your enterprise requires you to run standard services on non standard ports. Please configure the port for these services here.
3. To override, click the edit button of the respective service, and then write the required port number
4. Click on **Continue** to proceed

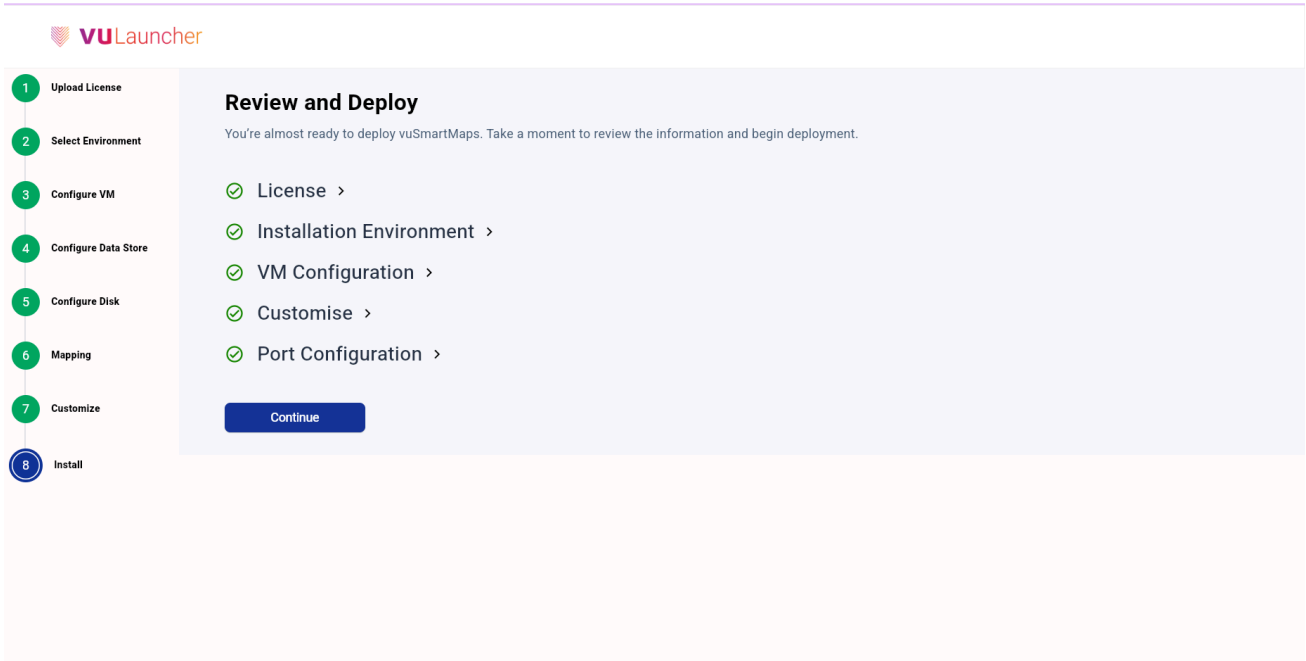


8. Install

1. Here this page shows the summary of the information that the user provided.

2. You can click the edit button on the details page, to move back to their respective section and override the change.
3. You can also click the name of the stepper window to move.
4. Then click **Continue**, to start the deployment procedure.

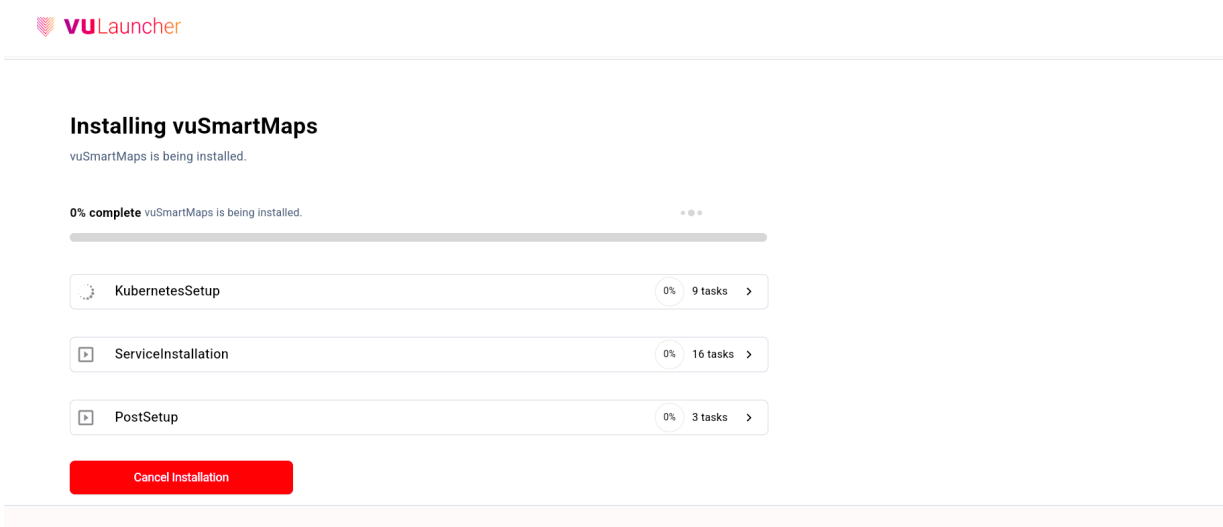
 **Note:** Once you start the deployment, you cannot edit the configuration you provided.



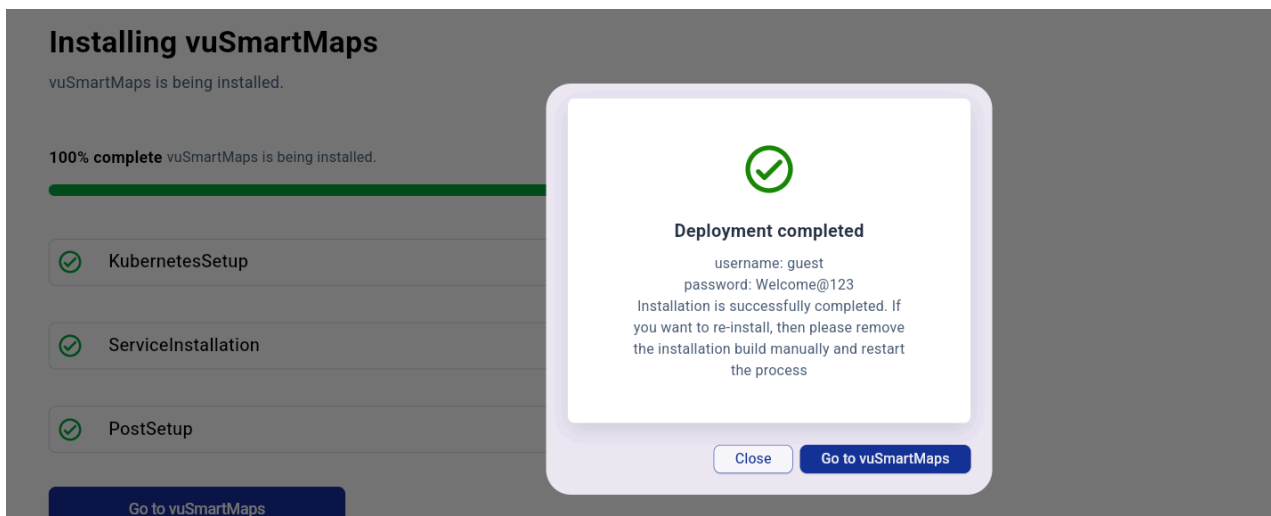
The screenshot shows the VULauncher interface at the 'Review and Deploy' stage. On the left is a vertical stepper with 8 steps: 1. Upload License, 2. Select Environment, 3. Configure VM, 4. Configure Data Store, 5. Configure Disk, 6. Mapping, 7. Customize, and 8. Install. The main area is titled 'Review and Deploy' and contains a list of checked items: License, Installation Environment, VM Configuration, Customise, and Port Configuration. A blue 'Continue' button is located at the bottom of this list.

9. Installing vuSmartMaps

1. The installation shows each event that is going to be performed.
2. Users can click **Cancel Installation** to stop the ongoing installation. Additionally, they can retry if the process is halted or if the installation stops.




The screenshot shows the 'Installing vuSmartMaps' screen. At the top, it says 'vuSmartMaps is being installed.' Below this is a progress bar showing '0% complete'. Underneath the progress bar are three task cards: 'KubernetesSetup' (0% 9 tasks), 'ServiceInstallation' (0% 16 tasks), and 'PostSetup' (0% 3 tasks). At the bottom of the screen is a red 'Cancel Installation' button.



3. Once the installation is successful, a prompt will open. Here, users can click **Go to vuSmartMaps**, and it will redirect to the vuSmartMaps login page.
4. Use the below Login credentials, to login to the vuSmartmaps UI.

Username : guest

Password : Welcome@123

 **Note:** If for some reasons, your browser or laptop closes and you lose this page, please execute this command and restart your configuration deployment. Please restart launcher using `./build/launcher_linux_x86_64`

Post Deployment Steps

1. Login to the vuSmartMaps UI using the user credentials provided during the sign-up and navigate to Data Ingestion -> O11y sources
2. Enable Traces O11y source by clicking Enable

Quick Links To Get You Started

1. [How to enable Traces O11y source?](#)
2. [How to Instrument a Java application?](#)
3. [How to navigate dashboards?](#)
4. [Pre-packaged Alerts with vuApp360](#)
5. [How to configure alerts?](#)
6. [How to access alert Notifications](#)